UTILITY PATENT APPLICATION

COVER SHEET

Inventor: Richard D. Bonaduce
2345 E. Campus Drive
Salt Lake City, UT 84121

Attorney: Randal D. Homburg
Reg. No. 41,847

Corresp. Address: Randal D. Homburg, #41,847
50 Penn Place, 4th Floor
Oklahoma City, OK 73118-1803
(405) 842-0229

Title of Invention: **Omnidirectional Handlebar Reflector Insert**

TITLE OF THE INVENTION

Omnidirectional Handlebar Reflector Insert

CROSS REFERENCE TO RELATED APPLICATIONS

Provisional Patent Application No. 60/277,898 filed on March 23, 2001.

I. Background of Invention

1. Field of the Invention

The invention is a reflective insert for bicycles, tricycles or other vehicles having hollow handlebars, the device having an omnidirectional reflective surface attaching to a handlebar plug which, when inserted into the handlebar, provides a reflective surfacing to gather light from multiple directions and reflect such light in an omnidirectional array.

2. Description of Prior Art

The following United States patents are identified and disclosed herein. Several devices are disclosed relating to handlebar inserts with reflective characteristics. For example, in United States Patent No. 5,349,920 to Kiozumi, a dangling reflector or a wind-spun reflector, refractor or light emitter is disclosed attaching to handlebars either in the handlebar grip, from the driver's wrist, or from a suspensory attachment, the device also including a power source for the light emitting embodiment. U.S. Patent No. 4,715,681 to Johnson discloses an adjustable mirror attaching to a set of handlebars having a multiple direction adjustment to provide the user with a visible capacity for rear view. Reflective domed mirrors are disclosed in U.S. Patent No. 702,763 to Aurness, the mirrors fitting within the handlebars as inserts providing the driver a means of seeing behind them while riding the bicycle without having to turn around.

II. Summary of the Invention

The objective of the current invention is to provide an omnidirectional reflector which is installed in the handlebars of a vehicle having handlebars which gathers light from a multiple number of directions and reflects the gathered light in an omnidirectional array. The device has a removable means of engaging the inner hollow portion of the handlebars with the omnidirectional reflector extending beyond the handlebar in a relatively domed extension, the extension providing a multiple faceted reflective disbursing surface.

III. Description of the Drawings

The following drawings are informal drawings submitted with this provisional patent application.

Figure 1 is a view of the invention on a set of handlebars.

Figure 2 is a side view of the invention.

Figure 3 is a front view of the invention.

Figure 4 is a side cross-sectional view of the invention.

IV. Description of the Preferred Embodiment

The invention, as shown in FIGS. 1-4 of the drawings, is a device **10** having omnidirectional reflective capacity, inserted and applied to the ends **110** of a bicycle, tricycle or other vehicles having hollow handlebars **100,** the invention comprising a cylindrical shaped body **20** having a length **22**, a plurality of flexible circular fins **30** in parallel alignment along the length **22** of the body **20** and a hemisphere-shaped reflective cap **40** attached to a first end **24** of the body **20**, the hemisphere-shaped reflective cap **40** having a multiplicity of facets **44** comprising the hemisphere-shaped reflective cap **40**.

The body **20** and the flexible circular fins **30,** as shown in FIGS. 2 and 4 of the drawings, are preferably a rubber or plastic product and are sized to fit within the end **110** of the handlebar **100**, the flexible circular fins **30** bending to form a snug internal fit within the handlebar end **110**. The hemisphere-shaped reflective cap **40** should be made of a highly reflective material, such hemisphere-shaped reflective cap **40** extending beyond the end **110** of the handlebar **100**, as shown in FIG. 1 of the drawings. The hemisphere-shaped reflective cap **40** should be of a diameter **42** to prevent complete insertion of the hemisphere-shaped reflective cap **40** into the handlebar end **110**.

The multiplicity of facets **44** should be arranged in a geometric pattern, as shown by example in FIG. 3 of the drawings, to maximize the potential for gathering light and reflecting such light in an omnidirectional array, providing the greatest reflective exposure from applied light to clearly indicate the presence of the device **10** in the handlebar **100**, thus enhancing the recognition of the presence of the vehicle to which the device **10** is applied in the darkness.

Although the embodiments of the invention have been described and shown above, it will be appreciated by those skilled in the art that numerous modifications may be made therein without departing from the scope of the invention as herein described.

What is claimed is: